

ABSTRACT OF THE DISCLOSURE

The present invention provides a method of producing an electron emitting device using a carbon fiber using a catalyst, capable of preferably growing
5 carbon fibers at a low temperature without the need of a high temperature process for growing the carbon fibers or a high temperature alloy process on a substrate, and growing the carbon fibers by a density capable of applying an electric field necessary for
10 the electron emission further effectively. Using alloy particles containing Pd and at least one element selected from the group consisting of Fe, Co, Ni, Y, Rh, Pt, La, Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, and Lu as the catalyst, a dispersion of the alloy
15 particles is applied on a carbon fiber producing subject surface for providing the alloy particles so as to grow the carbon fibers.